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Revisiting the Financial Statement Treatment of Goodwill

Goodwill arises when a company is acquired at a price that exceeds the fair market value of its identifiable net assets. Accounting for goodwill has evolved over the years from one of writing it off directly against equity to one of reporting it as an asset subject to amortization, to today's treatment, as codified in ASC 350-20, that calls for it to be carried as an asset without amortization but reviewed annually for impairment. In recent years, goodwill has steadily increased as a percentage of total assets. With the growing size of goodwill comes the growing risk that carrying goodwill on the balance sheet without amortization may overstate perceptions of company performance. In effect, the acquisition premium represented by goodwill has no readily apparent cost because there is no regular earnings impact in the form of a recurring expense. Further, total assets and shareholders' equity are reported at higher amounts.

This research report examines the validity of concerns surrounding goodwill's growing balance sheet presence through the lens of commonly used financial metrics. For a large sample of firms, we calculate return on equity (ROE), net margin, asset turnover, and financial leverage while assuming that goodwill is written off to equity, carried as an asset, or amortized as an expense.

Carrying goodwill without amortization leads to an average net margin that is 15.2% higher (6.4% vs. 5.6%) than when goodwill is amortized over an assumed 20-year amortization period. However, because asset turnover and financial leverage are higher under an amortization approach, there is little difference in return on equity. Average ROE when goodwill is not amortized is 7.8%, vs. 7.7% when goodwill amortization is included as an expense in measuring net income.

Our recommendation to analysts is to be alert for goodwill on company balance sheets. As seen here, the number of companies reporting goodwill and the amount of that goodwill are growing. When present, analysts must keep in mind that no recurring expense for goodwill is being reported. As such, net margin and ROE are higher than if goodwill were amortized. Those additional unamortized assets, however, are lowering asset turnover and financial leverage and raising the risk of a future goodwill impairment charge.

Data for this research are provided by the Wharton Research Services Compustat database.

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Georgia Tech Financial Analysis Lab

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Because the Lab is housed within a university, all of its research reports have an educational quality, as they are designed to impart knowledge and understanding to those who read them. Its focus is on issues that it believes will be of interest to a large segment of stock market participants. Depending on the issue, it may focus its attention on individual companies, groups of companies, or on large segments of the market at large.

A recurring theme in the work is the identification of reporting practices that give investors a misleading signal, whether positive or negative, of corporate earning power. The Labs defines earning power as the ability to generate a sustainable stream of earnings that is backed by cash flow. Accordingly, its research may look into reporting practices that affect either earnings or cash flow, or both. At times, its research may look at stock prices generally, though from a fundamental and not technical point of view.

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Revisiting the Financial Statement Treatment of Goodwill

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Revisiting the Financial Statement Treatment of Goodwill

Introduction

This research report examines the financial statement treatment of goodwill and the implications for common valuation measures of the changes in accounting for goodwill that have taken place over the past 20 years. The current study contains a comparison of commonly used financial metrics across three commonly used methods of accounting for goodwill. All US-incorporated companies in fiscal years 2003 – 2017 with total assets and total revenues of \$100 million or more are included. Please see the Purpose and Design section for a full description of our methodology. That section is followed by a summary of the findings.

Goodwill is measured as the excess of the price paid for a company over the fair market value of its identifiable net assets. It indicates the value of a company's unidentifiable intangible assets, such as customer and employee relationships, technological expertise, and marketplace position. While companies are presently required to assess on an annual basis whether the value of goodwill is impaired, guidance on the accounting treatment for goodwill has changed through the years. This report looks at various accounting treatments for goodwill and considers how those treatments impact widely accepted measures of financial performance.

Goodwill is becoming a more significant asset on company balance sheets. For example, as presented in Table 1, goodwill has risen to 9.6% of total assets in 2017 from 8.7% of total assets in 2003. Similarly, as seen in Table 2, goodwill in revenue days is also on the rise, increasing to 78 days in 2017 from 52 days in 2003. Further, as goodwill increases, the portion of equity that is tangible, that is, calculated by excluding goodwill, is declining. As presented in Table 3, tangible equity as a percentage of total equity has declined from 80.7% in 2003 to 76.9% in 2017.

Table 1: Goodwill as a Percentage of Total Assets

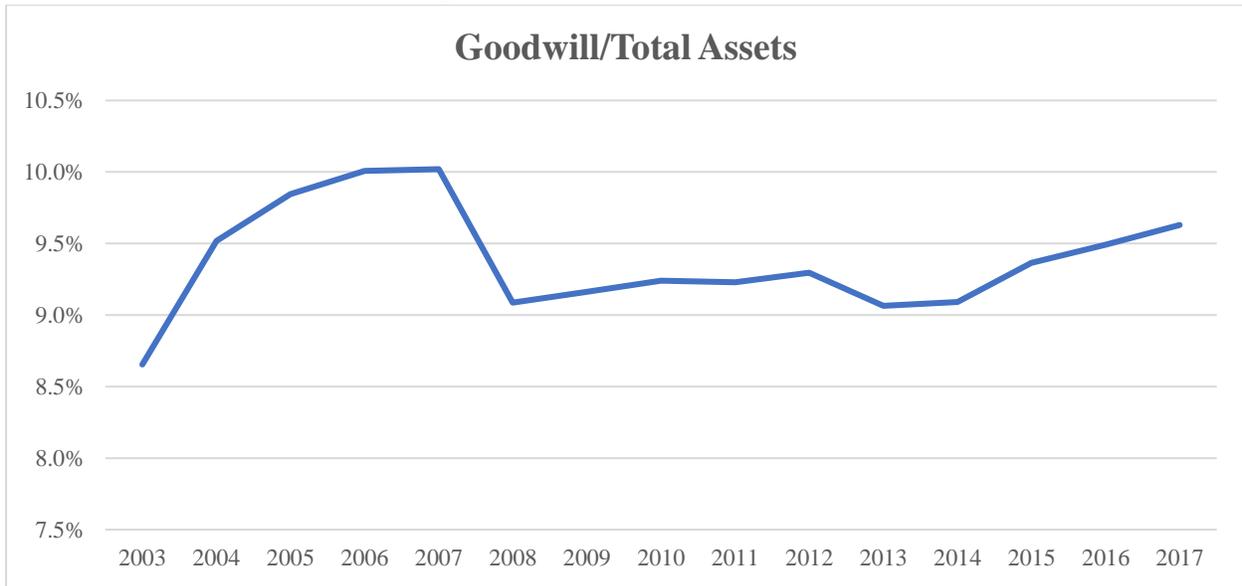


Table 2: Goodwill in Revenue Per Day

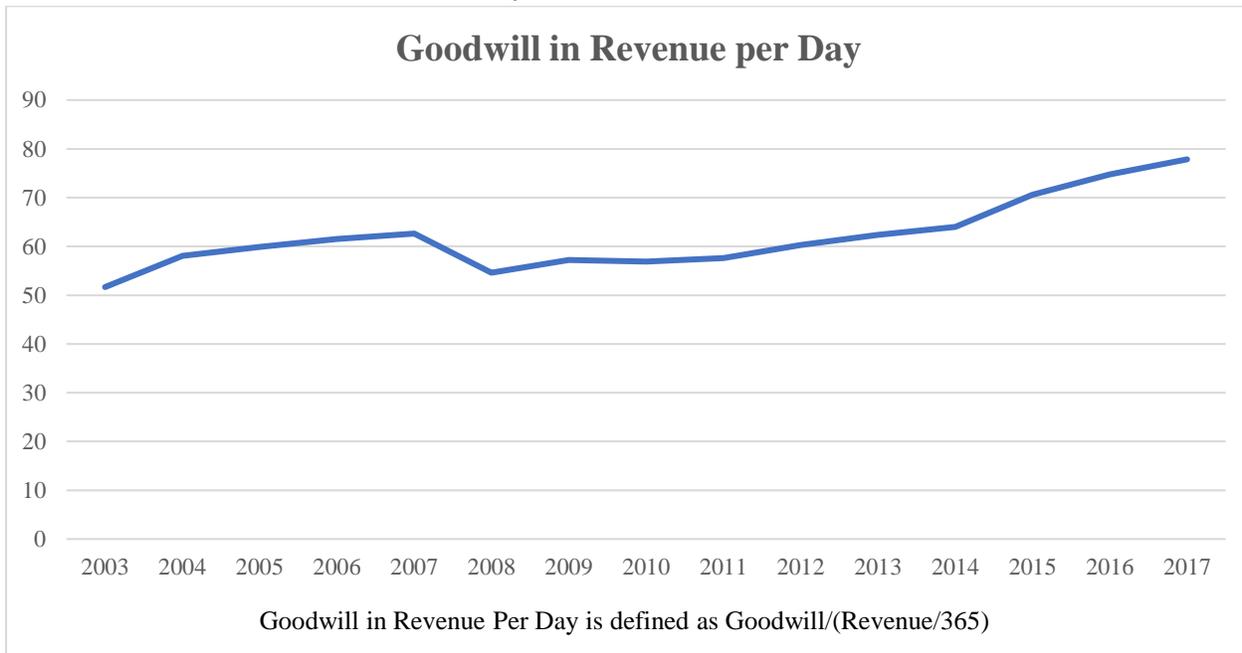
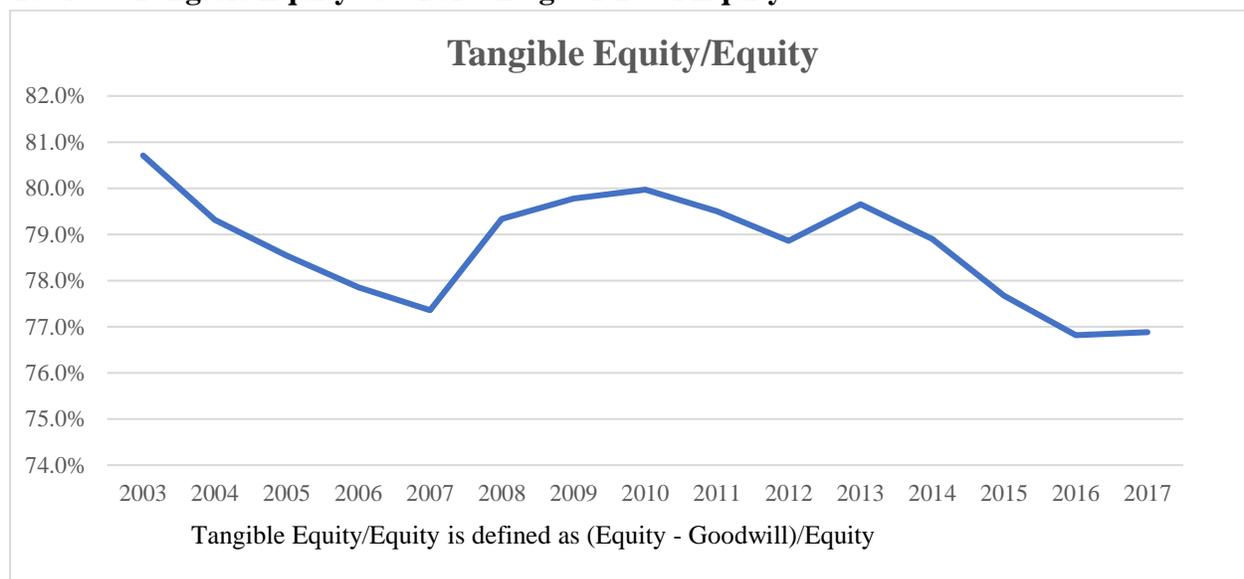


Table 3: Tangible Equity as a Percentage of Total Equity

There are multiple reasons to expect that companies would presently report higher amounts of goodwill than in years past. For example, the emergence and significant growth of digital companies with fewer hard assets would lead one to expect that greater portions of acquisition prices could be allocated to goodwill. Further, an increase in the number of acquisitions in recent years could be expected to increase goodwill on company balance sheets. For example, the Institute for Mergers, Acquisitions and Alliances (IMAA) reported that 2017 set a new record of 15,100 mergers and acquisitions deals in the United States. Also, as equity prices have risen, acquisition premiums would be expected to increase. According to the IMAA, the record for the total value of mergers and acquisitions in the United States was set in 2015 at \$2.41 trillion. Finally, changes in the accounting treatment for goodwill, from one of amortization to one of carrying it without amortization, could also be expected to increase goodwill amounts reported.

History of Accounting for Goodwill

The accounting for goodwill has evolved significantly over the years. The first formal accounting guidance for goodwill was Accounting Research Bulletin 43, issued in 1953. Up to that time companies were generally following any one of three approaches in accounting for goodwill: write off goodwill to equity, carry goodwill as an asset without amortization, or amortize goodwill as an expense.

ARB 43 narrowed the accounting treatment for goodwill. Companies were expected to carry goodwill as an asset as long as goodwill was determined to have an infinite life. Once goodwill was determined to have a finite life, ARB 43 chapter 5, paragraph 6 instructed companies to amortize goodwill “by systematic charges in the income statement over the estimated remaining period of usefulness”. These practices were in effect until the issue of Accounting Principles Board

Opinion 17 in 1970. APB 17 paragraphs 28 and 29 explained that goodwill “should be amortized on the basis of the estimated life...the period of amortization should not, however, exceed forty years”. Today’s accounting standards for goodwill were established in 2001 with Financial Accounting Standards Board Statement 142. Under FASB 142, as codified in FASB Codification, ASC 350-20-35, goodwill is carried as an asset and is only be written down if it is determined to be impaired. FASB Codification ASC 350-20-35, paragraphs 1 and 2 states, “Goodwill shall not be amortized. Instead, goodwill shall be tested for impairment...Impairment is the condition that exists when the carrying amount of goodwill exceeds its implied fair value.”

The latest update to the accounting standards for goodwill was not met with universal support. Critics argue FASB 142 provides managers too much power to determine the amount of goodwill carried on the balance sheet. Some worry the abandonment of goodwill amortization leads to an overstatement of goodwill, of book value and of net income. Without recurring charges to expense for goodwill amortization, goodwill becomes an asset with no readily apparent cost, possibly leading to overstated perceptions of company performance. In this report we endeavor to determine what, if any, impact the accounting treatment of goodwill has had on standard metrics of financial performance.

To examine the impact of the accounting treatment of goodwill, we evaluate the financial performance of our sample companies on four measures in three different scenarios. We calculate company return on equity (ROE), and three key drivers of ROE, namely, net margin, asset turnover, and financial leverage when goodwill is written off to equity, carried as an asset, or amortized. When goodwill is written off to equity, the balance of goodwill is simply removed from both assets and equity. The ability to write goodwill off to equity effectively removes adverse accounting impacts from overspending: the amount spent in acquiring a company above the fair market value of its identifiable net assets will not appear on the income statement or stay on the balance sheet, regardless of size. When goodwill is amortized, companies recognize goodwill as an asset on the balance sheet and reduce the value of the asset over an amortization period not to exceed 40 years. Amortizing goodwill creates expense that reduces net income on the income statement. In contrast to amortizing goodwill, carrying goodwill as an asset on the balance sheet does not reduce net income on the income statement.

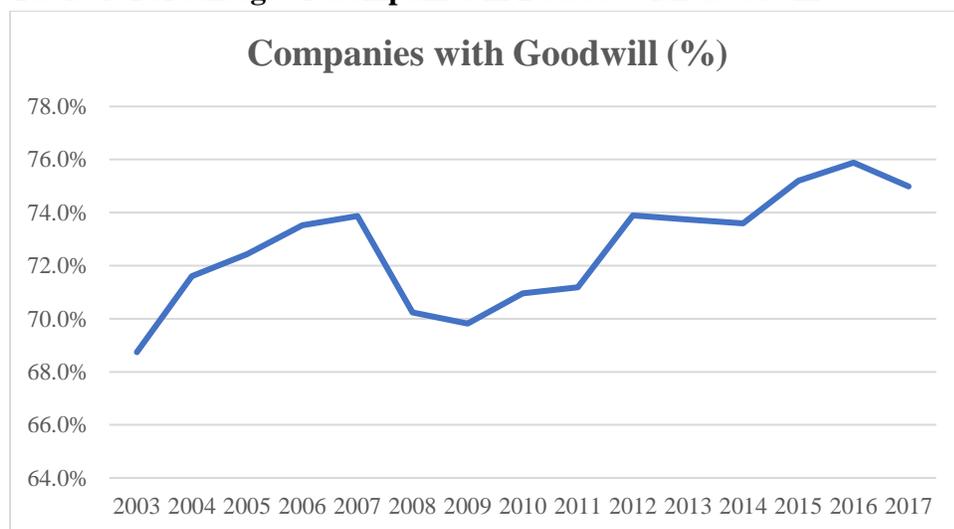
Purpose and Design

The purpose of this paper is to compare and contrast the financial impact of three different accounting treatments for goodwill on key measures of financial performance and position: ROE and its three key drivers, net margin, asset turnover, and financial leverage. The three accounting treatments for goodwill to be tested are: write off goodwill to equity, amortize goodwill over an assumed average 20-year period, and carry goodwill on the balance sheet without amortization.

We obtain our sample from the Wharton Research Data Services Compustat Database. The sample spans 15 fiscal years, covering consistent reporting of goodwill from 2003 through 2017. Companies in the dataset meet the following criteria: they are incorporated in the United States, they have total assets greater than \$100 million, and they have total revenues greater than \$100 million.

We further refine the dataset by removing companies with missing values for common shares outstanding, revenue, and closing fiscal year end stock price. As part of our analysis, we calculate tangible equity as equity less goodwill. To ensure sensible tangible equity/equity ratios we remove any companies that have tangible equity less than or equal to zero. In the same manner, we remove outliers from the dataset by eliminating all companies with ROEs greater than 100% or less than -100%.

Our final sample includes 36,878 rows of data and 4,998 unique companies across 15 years. The sample size used in any one year varies between 2,223 and 2,716 firms. Table 4 shows how the percent of companies with goodwill on their balance sheets has grown over the sample period.

Table 4: Percentage of Companies in Dataset with Goodwill

Year	Companies with Goodwill	Number of Companies	Companies with Goodwill (%)
2003	1,768	2,572	68.7%
2004	1,891	2,641	71.6%
2005	1,944	2,684	72.4%
2006	1,997	2,716	73.5%
2007	1,942	2,629	73.9%
2008	1,666	2,372	70.2%
2009	1,689	2,419	69.8%
2010	1,740	2,452	71.0%
2011	1,727	2,426	71.2%
2012	1,755	2,375	73.9%
2013	1,766	2,395	73.7%
2014	1,795	2,439	73.6%
2015	1,729	2,299	75.2%
2016	1,696	2,235	75.9%
2017	1,667	2,223	75.0%

Particularly noticeable is the growth in companies with goodwill following the adoption of FASB 142. In 2003, the first year after FASB 142 was adopted, 68.7% of the companies in our dataset report goodwill. Over the next few years, this figure grows steadily before experiencing a slight decline during the financial crisis in 2008 and 2009. By 2017, 75.0% of the companies in our sample report goodwill. Clearly, goodwill is growing on company balance sheets.

Results

Our base scenario is one in which companies carry goodwill on the balance sheet without amortization (Carry). In the Carry scenario, no adjustments are made to the data. That is, the various financial performance metrics are calculated with goodwill as reported. To simulate goodwill with amortization, our second scenario, we assume that half of a company's goodwill balance has been amortized, subtracting this amount from assets and equity. We also remove 1/20th of goodwill from net income to reflect a 20-year amortization schedule (Amortize). To simulate goodwill written off to equity, our third scenario, we subtract each company's entire goodwill balance from assets and equity (Write off).

As to be expected, Tables 5 and 6 show ROE is higher under the Write off scenario. The Write off scenario reduces equity by the amount of goodwill, so net income looks better in comparison with equity than it otherwise would. There is not as much of a difference between the Carry and Amortize scenarios: even with a 20-year amortization schedule and half of goodwill removed from equity, the Amortize ROE tracks well the Carry ROE. As presented in Table 6, calculated over the 15-year sample period, average ROE for the Write off scenario is 20.5%, vs. 7.8% for the Carry scenario and 7.7% for the Amortize scenario.

Table 5: Average ROE under Various Accounting Treatments for Goodwill

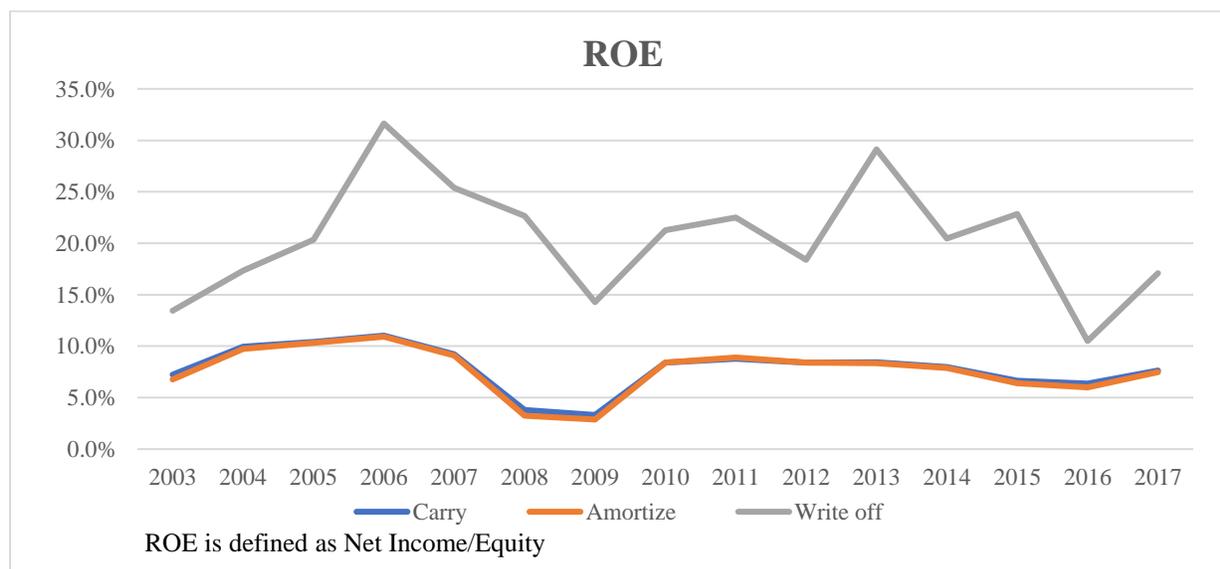


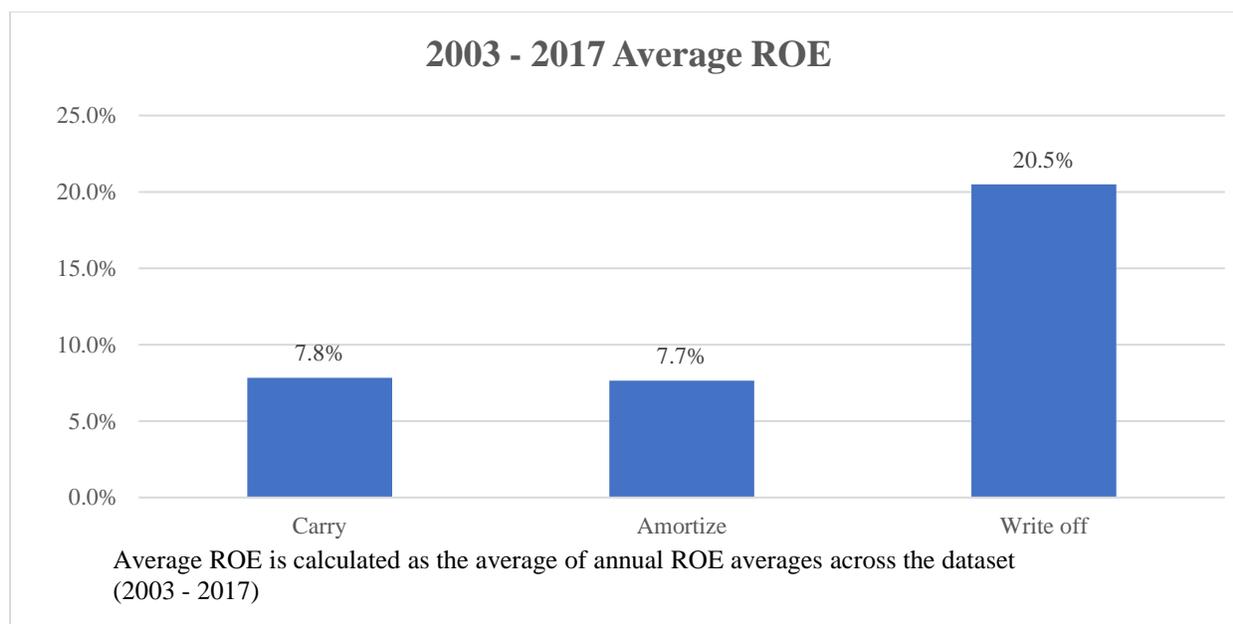
Table 6: 15 Year Average ROE under Various Accounting Treatments for Goodwill

Table 7, which presents net margin, combines the Carry and Write off scenarios. Net margin does not vary between the Carry and Write off scenarios as neither net income nor sales are affected by the removal of goodwill from assets and equity. Under the Amortize scenario we expect lower net margins due to goodwill amortization reducing net income, and we see in Table 8, on average, net margin is 80 basis points lower in the Amortize scenario, 5.6% vs. 6.4%.

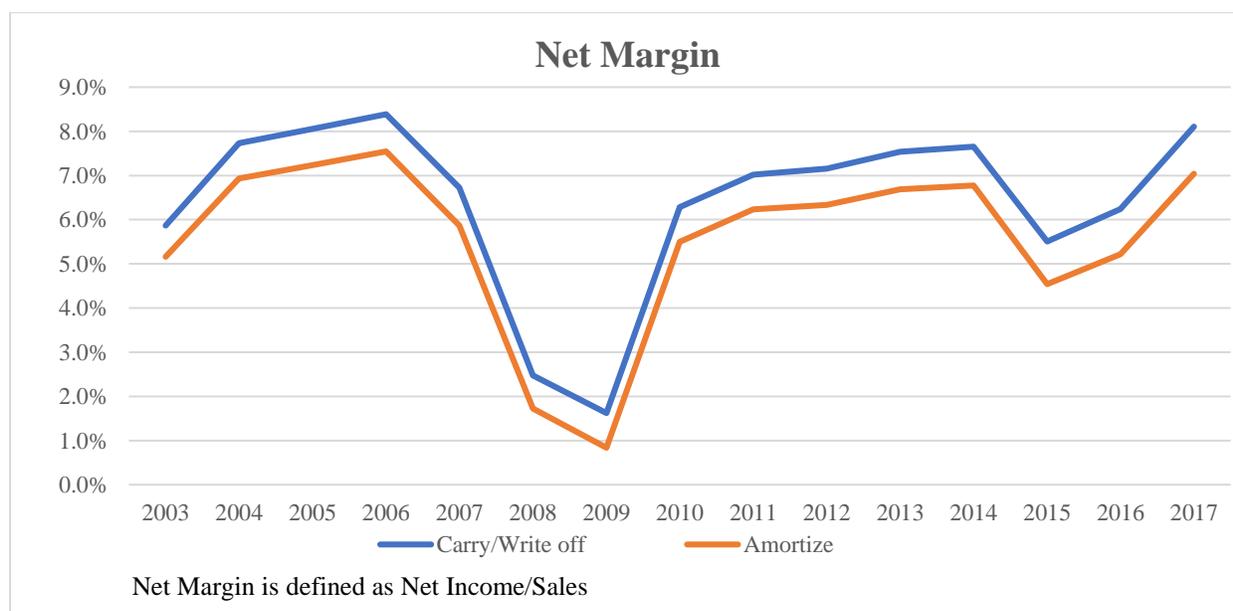
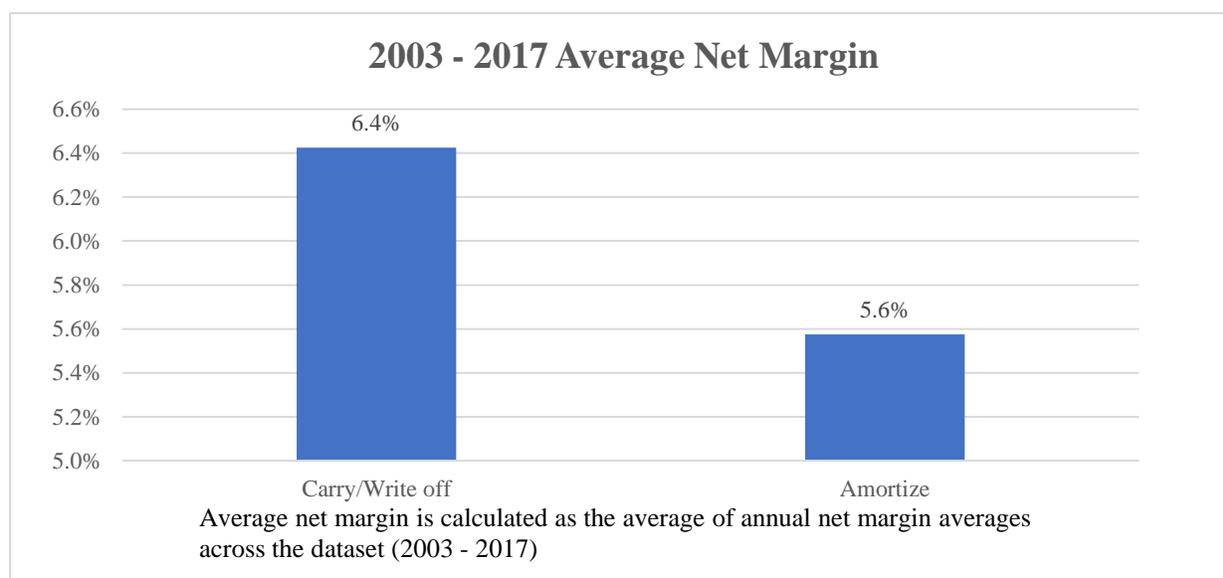
Table 7: Average Net Margin under Various Accounting Treatments for Goodwill

Table 8: 15 Year Average Net Margin under Various Accounting Treatments for Goodwill

Tables 9 and 10 illustrate asset turnover in each scenario. The Write off scenario shows the highest sales to assets since all goodwill has been removed from assets. The Amortize scenario has half of goodwill removed from assets. The Carry scenario leaves all goodwill on the balance sheet. As expected, asset turnover is higher when more goodwill is written off. As presented in Table 10, average asset turnover is 104.5% under the Write-off scenario vs. 97.0% under the Amortize scenario and 91.7% under the Carry scenario.

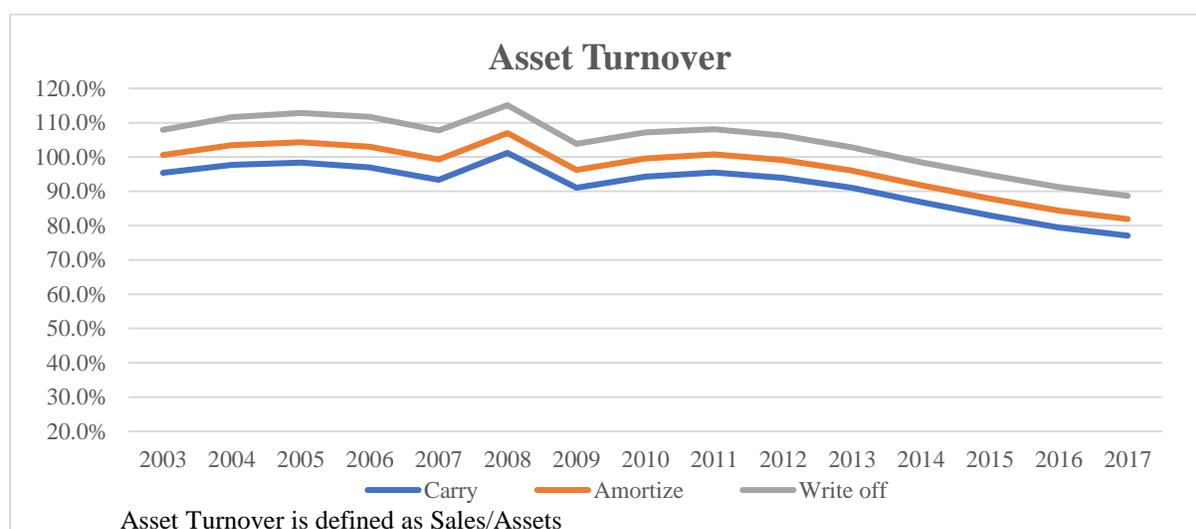
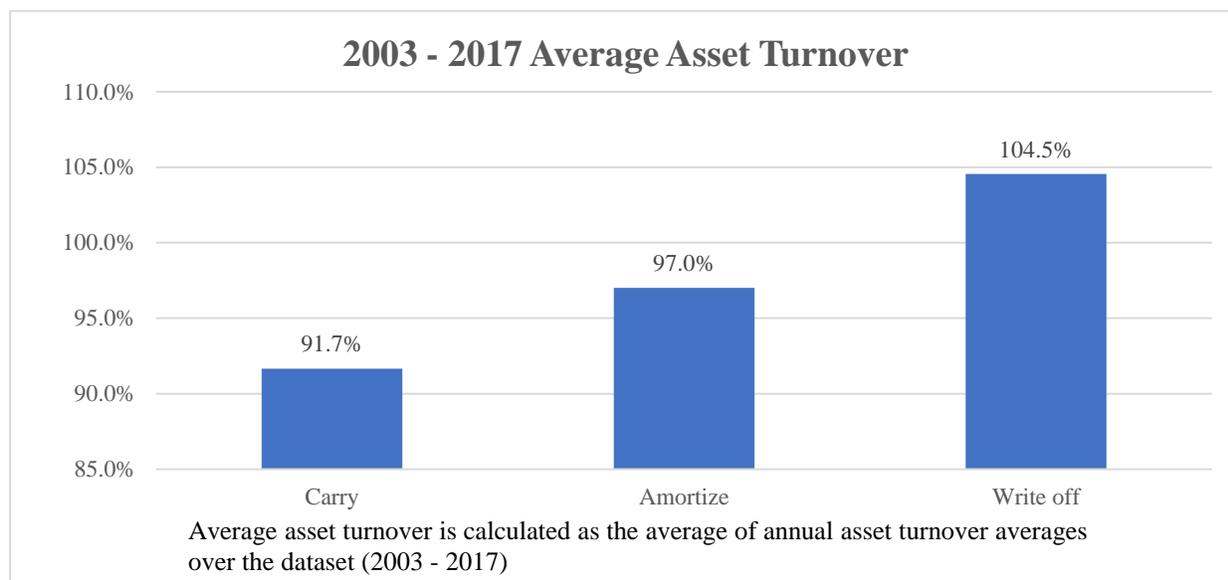
Table 9: Average Asset Turnover under Various Accounting Treatments for Goodwill

Table 10: 15 Year Average Asset Turnover under Various Accounting Treatments for Goodwill

Similar to ROE, Tables 11 and 12 show that financial leverage is much higher under the Write off scenario as both assets and equity have been adjusted to remove all goodwill. In spite of having half of goodwill written off to equity and assets, the Amortize scenario tracks well with the Carry scenario as companies appear equally levered in each. As seen in Table 12, average financial leverage is 6.3 under the Write-off scenario, vs. 4.0 under the Amortize scenario and 3.7 under the Carry scenario.

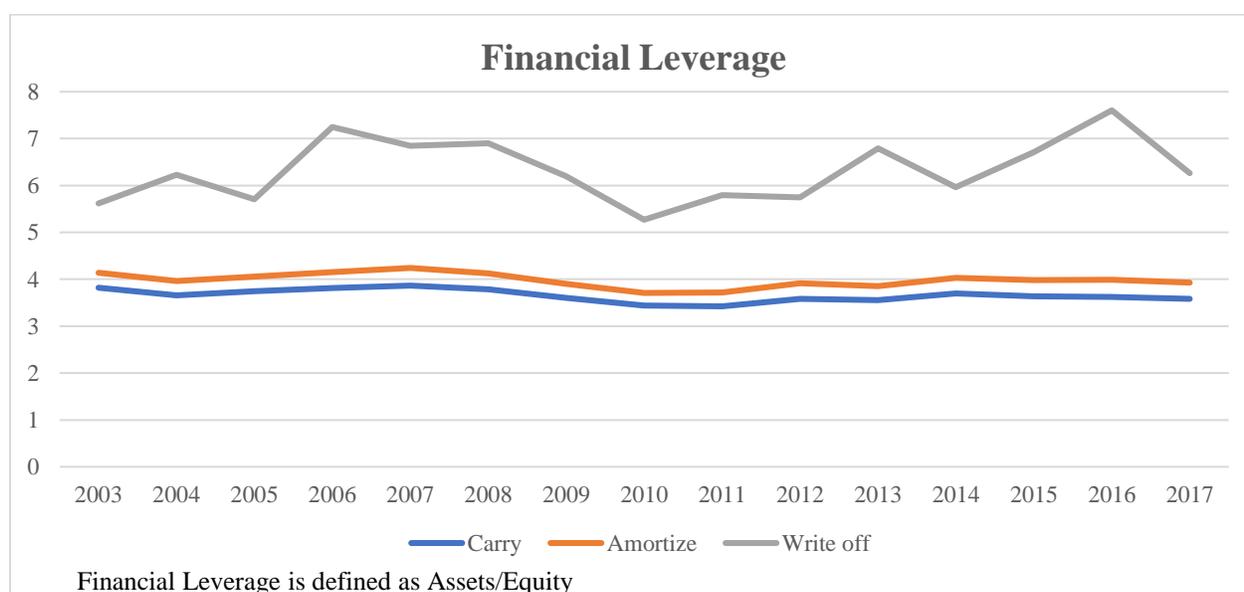
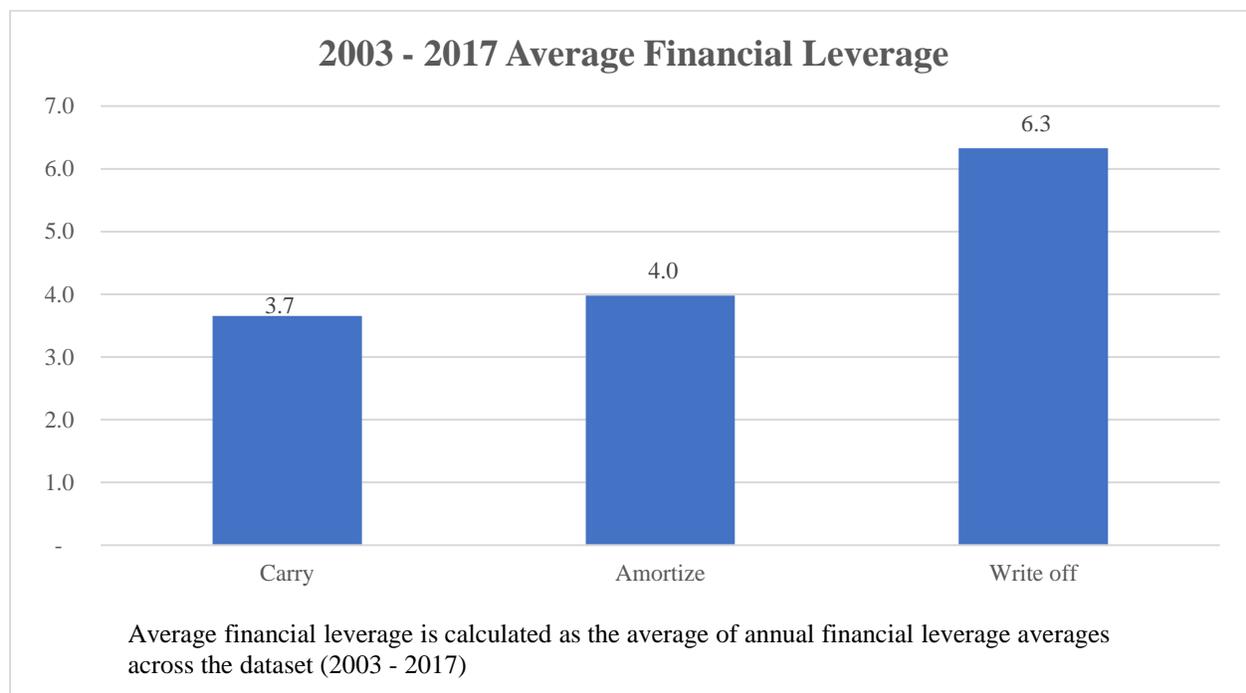
Table 11: Average Financial Leverage under Various Accounting Treatments for Goodwill

Table 12: 15 Year Average Financial Leverage under Various Accounting Treatments for Goodwill

Conclusion

Current accounting procedures for goodwill are explained in Financial Accounting Standards Board Statement 142 and codified in ASC 350-20-35, which requires goodwill to be carried as an asset on the balance sheet without amortization. Under this approach, goodwill is evaluated annually for impairment. Prior to the issuance of FASB 142, goodwill was either amortized in a period not to exceed 40 years or directly written off to equity. In line with updates to its accounting policy, goodwill has become an increasingly significant asset on company balance sheets. With the growing size of goodwill comes the growing concern that carrying goodwill on the balance sheet without amortization may overstate perceptions of company performance. In effect, the acquisition premium represented by goodwill has no readily apparent cost because there is no regular earnings impact in the form of a recurring expense.

This research report examines the validity of concerns surrounding goodwill's growing balance sheet presence through the lens of commonly accepted financial performance metrics. We present company return on equity (ROE), net margin, asset turnover, and financial leverage when goodwill is written off to equity, carried as an asset, or amortized as an expense. As expected, an immediate

write-off of goodwill against shareholders equity boosts ROE by raising net margin, asset turnover, and financial leverage. Average ROE under the Write off scenario is 20.5%, vs. 7.8% under the Carry scenario and 7.7% when goodwill is amortized. The small difference in ROE between the Carry and Amortize scenarios is driven by the counterbalancing effects of net margin, asset turnover and leverage. Amortization lowers average net margin to 5.6% under the Amortize scenario vs. 6.4% under the Carry scenario. However, asset turnover and leverage are higher under the Amortize scenario. Average asset turnover under the Amortize scenario is 97.0% vs. 91.7% for the Carry scenario. Similarly, average financial leverage is 4.0 for the Amortize scenario vs. 3.7 for the Carry scenario.

Should goodwill be amortized or carried without amortization and evaluated periodically for impairment? It is a question that will likely continue to be debated. Our objective is to put some numbers on the debate. Clearly, companies appear to be more profitable when goodwill is not amortized. For our sample, average net margin is 15.2% higher (6.4% vs. 5.6%) when goodwill is carried without amortization vs. when it is amortized. That sizable outperformance for net margin, however, does not translate directly into ROE because of the offsetting effects of asset turnover and financial leverage. Average asset turnover is 97.0% under the Amortize scenario vs. 91.7% for the Carry scenario and average financial leverage is 4.0 under the Amortize scenario vs. 3.7 under the Carry scenario.

Our recommendation to analysts is to be alert for goodwill on company balance sheets. As seen in our data, the number of companies reporting goodwill and the amount of that goodwill are growing. Calcbench reports goodwill accounts for more than 3% of total assets in the S&P 500. Calcbench also concludes average goodwill per S&P 500 firm is \$6.9 billion, up 35.4% since 2014. When present, analysts must keep in mind that no recurring expense for goodwill is being reported. As such, net margin and ROE are higher than if goodwill were amortized. Those additional unamortized assets, however, are lowering asset turnover and financial leverage and raising the risk of a future goodwill impairment charge.